School Shop

vol. IX no. 3

NOVEMBER, 1949

Foundry Program—New Style
by Edward J. Huttenga

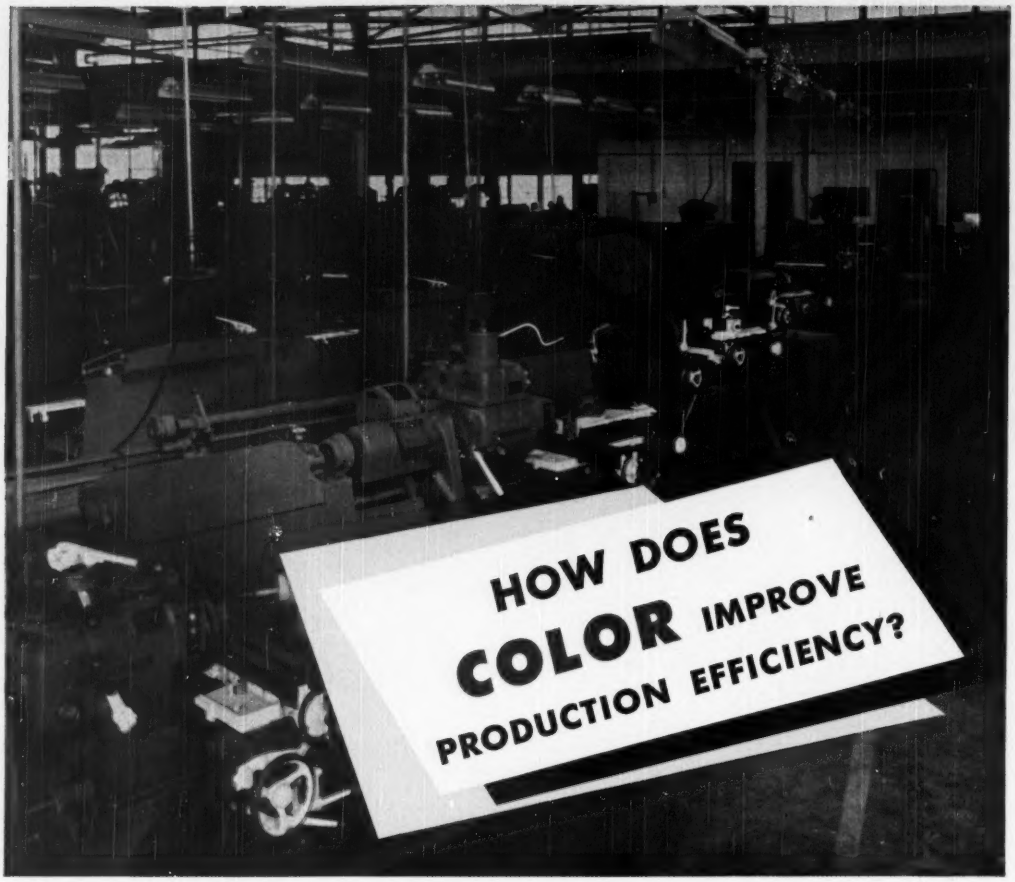
Bandage Cutter
by Clarence A. June

Plastic Letter Opener
by John R. Cunnee

Types of Teachers
by Proctor & Griefzu

On the cover: Inspecting a mold in the new foundry at Muskegon, Michigan. See page 5 for the story of this new set-up.

THE MAGAZINE FOR TEACHERS OF INDUSTRIAL EDUCATION



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In the Offing . . .

The December issue will feature an article on practical democracy as it functions in school shops in the city of Reading, Pa. We believe our readers will want to apply some of the principles applied there to their own shops. We will also bring you the latest and best in tested project material and the usual SCHOOL SHOP features. Look for news on latest developments in plans for the American Vocational Association convention in Atlantic City.

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School Shop

FOR INDUSTRIAL EDUCATION TEACHERS

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School Shop is published monthly, September through June, at Ann Arbor, Michigan. Manuscripts are paid for at regular space rates and should be addressed to the Editor, School Shop, 330 South State Street, Ann Arbor, Michigan. Subscription rates, $2.00 a year; Canadian, $2.00 a year; foreign, $3.00 a year. 50 cents a copy for the April issue. Others 25 cents a copy. Printed in the U.S.A.

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Advertising Representatives: Mid-West—Macintyre-Simpson & Woods, 75 East Wacker Drive, Chicago 1, Central 6-1715. Eastern—Macintyre-Simpson & Woods, 101 Park Avenue, New York 17, Lexington 2-8998.

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School Shop TALK

COMMENTS ON ISSUES FACING INDUSTRIAL EDUCATION

Where Is Industrial Arts in the AVA?

By Professor Thomas Diamond, University of Michigan

As a rule, statistics are pliable and may be molded into any form desired by the person presenting them. Because of this, one is likely to view statistical reports with certain reservations. On page 27 of the September issue of the *American Vocational Journal*, however, we find a statistical report on the membership in the American Vocational Association which we are inclined to believe presents the facts.

If the reader will accept this premise, then it may be of interest to industrial-arts teachers to observe their number, by states, who are members of the AVA.

	Membership	
State	*Indus. Education*	*Indus. Arts*
1	62	1
2	237	2
3	62	2
4	261	4
5	32	1
6	126	0
7	520	27
8	177	3
9	72	4
10	135	6
Totals	*1684*	*50*

One criterion commonly used in measuring a person's professional attitude is the extent to which he belongs to the professional organizations in his field. If this basis is sound, then the statistics presented here would seem to indicate that the professional attitude of the industrial-arts teachers, in the ten states listed, is depressingly low when compared with that of the industrial-education teachers. In spite of the strong evidence supporting this conclusion, we are inclined to believe that it is erroneous and that there must be some other reason for the obvious lack of interest in the AVA on the part of industrial-arts teachers.

Could it be that the method of administration of the AVA has created the impression that the organization is concerned primarily with school activities which are reimbursable from state and federal funds?

Does the policy under which the presidency of the AVA is rotated between agricultural, trade and industrial, and homemaking education create the impression among industrial-arts people that they are relatively unimportant in the organization?

Do those in the industrial-arts field feel that the administration of the AVA does not provide a type of program which will attract people from their field of interest?

Have the leaders in the field of industrial arts been active in conveying to their associates the philosophy that the work they do has a definite relationship to industrial education, or have they tended to develop the idea that industrial education is a thing apart which has no relationship to the general education group to which the industrial-arts teacher feels he belongs?

Whatever the reasons, it is obvious that the industrial-arts group is not as well represented as its work warrants. If this situation is to be changed for the better, industrial-arts leaders must become more active in the administration of the AVA and they must have a large supporting group of members behind them. To attain this, an active educational campaign should be carried on so that industrial education and industrial arts will be recognized as members of the same family with common interests and many common problems.

There is nothing wrong with the industrial-arts teacher. However, the writer is forced by the figures above to the conclusion that there is something wrong somewhere when the average number of AVA members in ten states from the industrial-arts field is only five.

One of the major tasks of the AVA administration is to examine the situation critically with the end in view of establishing conditions which will attract to the organization the vast number of industrial-arts teachers.

Comments Invited

The viewpoint expressed above is on a topic of such widespread interest that readers are invited to express their opinion on the situation. SCHOOL SHOP is glad to serve as a forum for the discussion of all topics of importance.

Your Editor

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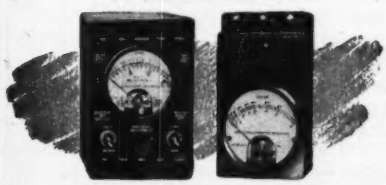

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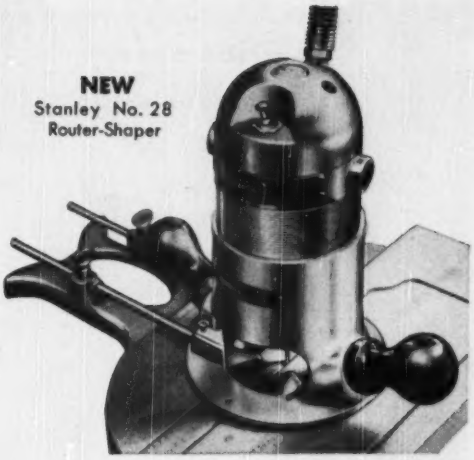

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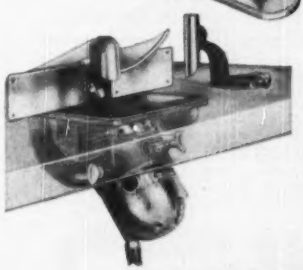

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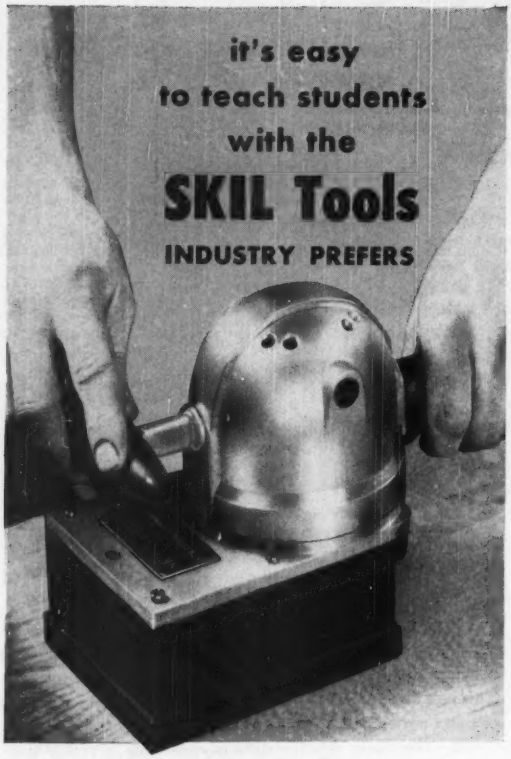

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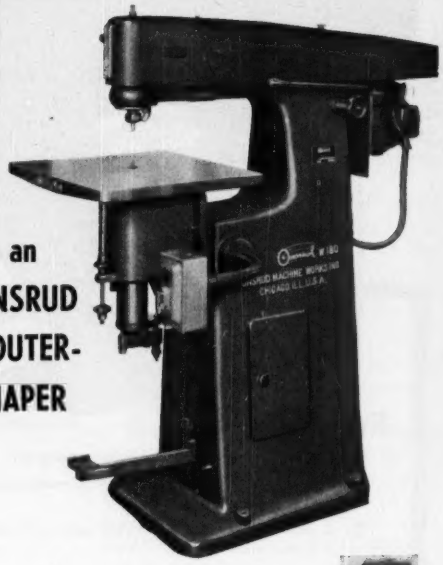

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Foundry Program—New Style

By Edward J. Huttenga

Here is an amazing story of industry and school cooperation that resulted in a remarkable face-lifting operation for the foundry department of the Hackley Manual Training School, Muskegon, Michigan. Edward J. Huttenga is Director of Vocational Education for Muskegon.

Note the large number of work stations in the remodeled foundry department of the Hackley Manual Training School, Muskegon, Michigan, where Adrian J. Archambault is instructor.

THE foundrymen of Muskegon have demonstrated that cooperation between private industry and the public-school system can create a desirable type of training program.

The story begins with an occupational survey that was made in September 1946. It was made under the guidance of Claud A. Bosworth, then Director of Vocational Education, and a City-Wide Industrial Advisory Committee with the help of the Muskegon Manufacturers' Association and the U. S. Employment Service. It disclosed that 22 percent of the gainfully employed persons in Muskegon were working in the foundries or allied enterprises. These figures appeared to indicate a definite need for foundry training.

A modernization program of the vocational education offerings was taking shape and the foundry completed the four units of the industrial cycle: drafting, pattern making, foundry, and machine shop.

The first step taken was to request Robert Mason, Executive Secretary of the Muskegon Manufacturers' Association, to form a committee from the industrial foundry group to investigate what might be done about renovating the foundry section of the school. This group was organized and immediately appointed a subcommittee from the members' engineering departments to prepare a plan and estimate the cost of rehabilitation.

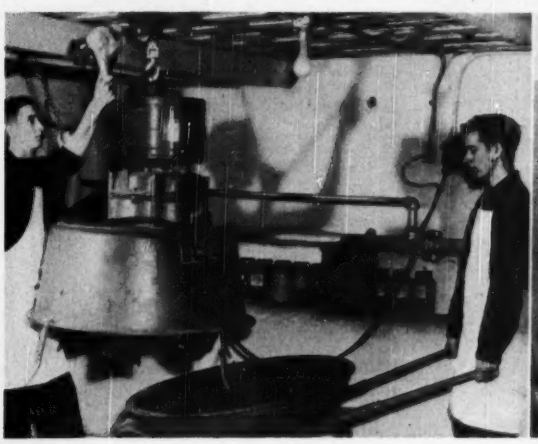
Plans for a modern layout were prepared which incorporated the latest advancements in the foundry industry. It was also recommended that safety and cleanliness in the foundry be stressed. Among the suggestions were that a brick surface be laid over the old floor, that a modern washroom be included with showers and lockers, and that safety equipment be provided, including goggles, leggings, safety shoes, gloves, and asbestos aprons for furnace work.

Suggested mechanical equipment included an electric melting furnace to provide actual casting demonstrations daily, molding machines, grinding and shot-blast cleaning units, modern molding benches with complete tools for each student, and mechanical sand mixing equipment. A laboratory, complete with sand-testing instruments, was recommended also.

The subcommittee submitted with its plans an itemized estimate calling for the expenditure of approximately $20,000 to purchase and install the necessary equipment.

At this point a Donors' Group, sep-

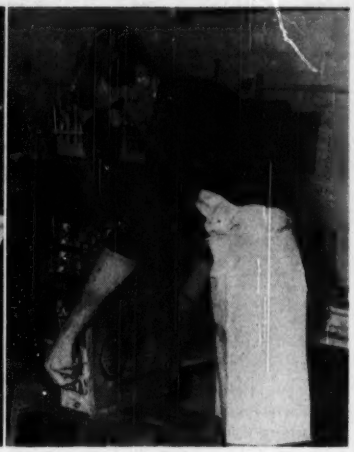
Molding sand is prepared in this portable mixer.



Testing sand in the laboratory section with the tensile machine.

Sand being riddled before ramming mold.

Student foundryman ramming a drag.



Removing mold cope section from the pattern.

arate from the original committee, was organized to secure the necessary funds and equipment. The group consisted of executives of local foundries and such related industries as pattern shops, equipment manufacturers, foundry supply dealers, scrap dealers, building and steel fabricating organizations, and trucking firms and was under the chairmanship of George W. Cannon, Board Chairman of the Campbell, Wuant and Cannon Foundry Co.

A comprehensive outline of the foundry rehabilitation project was given to the board of education when the necessary funds and equipment had been secured. The board enthusiastically approved the program and agreed to prepare the building and install the equipment.

The accompanying illustrations show the up-to-date equipment which the foundry now contains. The electric furnace of the rocking type has a 60-pound charge capacity, 100 pounds molten metal capacity, and has an extra shell for nonferrous metals and a jib crane for ladles. An air compressor furnishes 142 cfm at 100 pounds pressure. Castings may be cleaned with a double-spindle floor-stand grinder and a shot-blast cabinet, both with dust collectors.

A portable type muller of 3½ cubic feet capacity per batch is used for preparing sand and a small mixer of the laboratory type is also available. Benches for coremaking are located adjacent to a shelf-type gas-fired oven and racks for storage of cores. The sand laboratory is well equipped with such facilities as sand specimen dryer, sieve shaker with timer, moisture teller, sieves, motor-driven sand strength tester, balance, and sand rammer.

Two machines comprise the molding equipment—one mechanical and the other hand operated—and there are 11 molding benches outfitted with necessary tools. A feature of the benches is an apron under each one to prevent the piling up of sand which would be difficult to remove at the end of the class period. Cope and drag flasks of the pop-off type and jackets in a variety of sizes are provided.

The foundry walls are finished in an attractive color scheme. Highly efficient illumination is provided by ample window space supplemented by artificial lighting. The modern wash- and locker-room compares favorably with that in

(*Continued from page* 24)

Gray iron coming from the electric furnace.

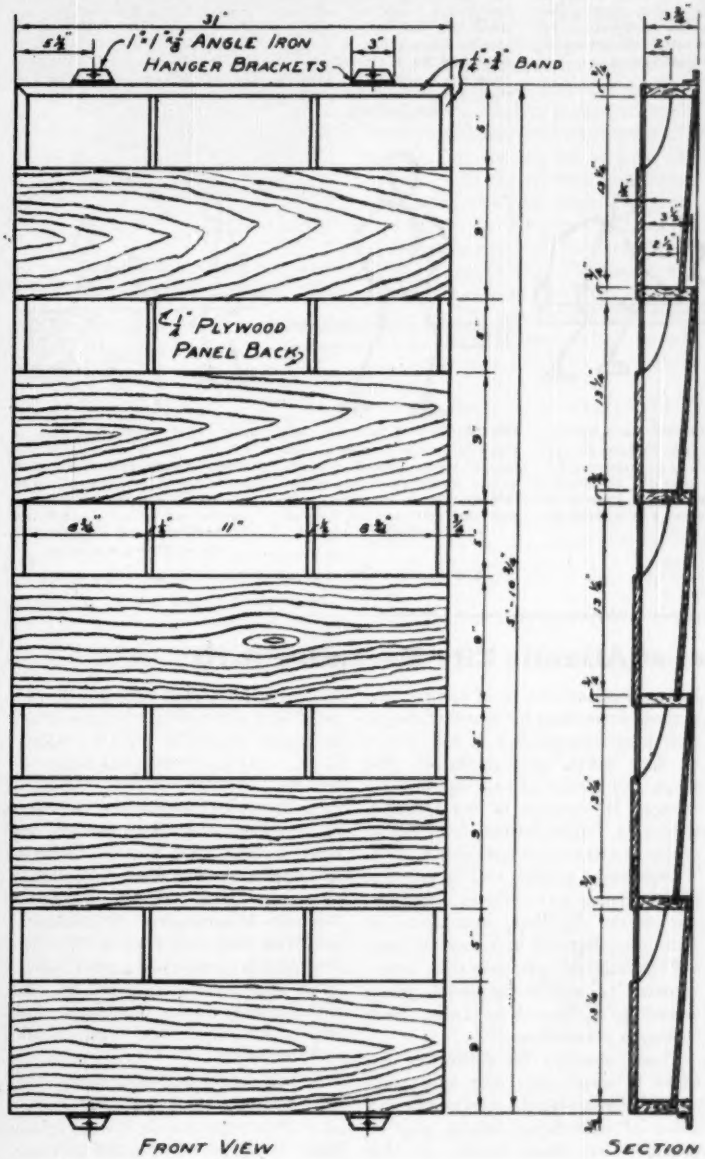
Pouring molds made by the class.

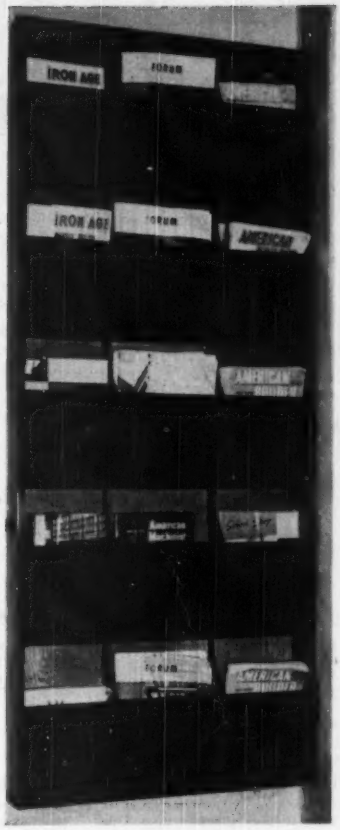
Preparing to clean casting by sand-blast.

Wall Rack for Magazines Increases Student Use

By George Shalkhauser

Technical and professional magazines are important to have readily available for student use. This wall rack project will bring periodicals to the attention of shop students so they will get into the habit of consulting them. George Shalkhauser is on the faculty of the El Paso, Texas, Technical Institute.





A RACK to hold current magazines is essential in the shop library, whether in a separate planning room or out in the shop proper. Where floor space is at a premium, a wall rack of the type shown here is desirable.

The backs of the compartments in this rack slant to hold the magazine upright. Each compartment is large enough to hold a number of issues of a magazine of ordinary size. Before construction is started, check the width of the magazines to be accommodated for the spacing of the division pieces and design the spaces accordingly.

This design may be varied by substituting slatted fronts which allow more of the cover of the magazine to show, but make the placing of the magazines in the rack a little more difficult as they catch in the slats. The dividers may be omitted also.

The inside of the rack can be finished with shellac and the outside with stain and varnish.

This rack makes an excellent project for students who can thus contribute to the facilities of the school shop.

Types of Teachers

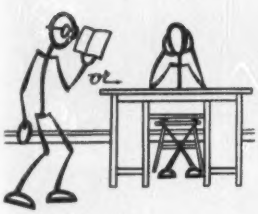
By James O. Proctor and G. Edward Griefzu

Department of Vocational Education, Baltimore, Maryland

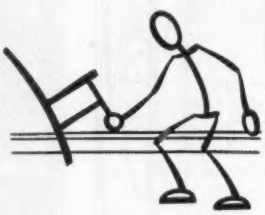
THE ORATOR: He will talk loud and long on any topic. Usually he doesn't use a plan, claiming they are only for the unprogressive. He is often unaware of student snoring or dwindling class roll.

THE "SMOOTHIE": He is the perfect gentleman, smartly dressed; everybody's friend, but under observation a poor teacher. His personality endears him to the students and his reinforced excuses make him a supervisor's dilemma. He is a social asset but a professional liability.

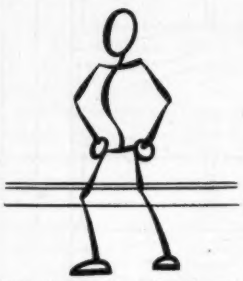
THE SITTER: He loves to teach and sit. He can teach any subject from a sitting position. The students form a line to his desk to have their work checked. The body begins to move at the close of the period and he often leads the class out of the door.



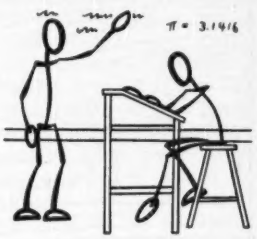
THE THINKER: He comes in two types: (1) The absent-minded or preoccupied type who doesn't always hear the student's question and often supplies a foreign answer. (2) The "heavy thinker" or unapproachable type. The student often feels guilty as if interrupting "genius at work."



THE SHOW-OFF: He is always good for a laugh. He loses the respect of students in proportion to his ability to show off. He usually knows his work but his approach is crude and he has a false sense of values.



THE BLUFF: He will talk with authority until a question or discussion breaks through the thin surface of his knowledge of the subject. Excuses or griping over poor equipment and too few supplies often follow.



THE REAL TEACHER: He is friendly; he is enthusiastic; he knows his subject; he has a plan and sticks to it; he knows how to present his work in an interesting manner; and he isn't afraid to say, "I don't know but I'll work with you in finding a solution."

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AVA to Meet at Atlantic City December 6-10

HIGHLIGHTS of the Atlantic City Convention of the American Vocational Association December 6-10 include a special exhibit of layouts for new school shop installations and a program of preconvention and postconvention school visitations in the Philadelphia-New York-New Jersey area.

The Industrial Education Section program is under the direction of Edward Berman, Assistant Superintendent of Schools, Bayonne, N.J., who promises a particularly significant meeting.

Shriver L. Coover, Director of Industrial-Arts Teacher Education, State Teachers College, California, Pa., is chairman of the Industrial-Arts Section program and likewise promises a series of interesting and worth-while sessions.

A new feature of the convention will be the exhibit of shop layouts which has been planned to be of special help to those responsible for new facilities in their home communities. It will consist of floor plans, photographs of new shops, and models of new installations. Spencer D. Benbow of the Oakland, California, Public Schools, is in charge of this special educational exhibit.

Commercial exhibits will be more extensive than at any previous AVA convention and the Ship, organization of firms doing business with shop teachers, will provide an unusually fine entertainment as well as the usual prizes, according to Miss Alma Laird, Deck Officer for the meeting.

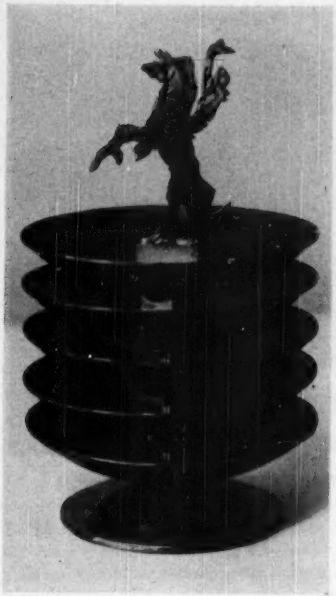
Those attending the convention are urged to spend some time either preceding or following the meetings in visitation of outstanding schools close to Atlantic City. Those wishing to visit schools in New York City will be provided with a list of all the schools and the trades taught in them by Morris Siegel, Assistant Superintendent of Schools, 110 Livingston St., Brooklyn, N.Y. There are several new buildings in New York City which embody the latest in school shop planning features. Information on New Jersey schools may be secured from John A. McCarthy, Assistant Commissioner of Education, 175 West State St., Trenton, N.J. The Philadelphia areas schools are about 60 miles from Atlantic City and may be visited readily as may the Atlantic City schools, of course, and others within a short distance.

SCHOOL SHOP will be holding open house at Booth 121 and cordially invites all readers to pay a visit. We are always happy to see our friends, old and new.

An "Art" Project for Machine Shop

By Herman Robinson

Teachers of machine shop will find that this project is useful as an "extra" when machines are busy or as an example of art-metal work. Herman Robinson teaches at the Godwin Heights School, Grand Rapids, Michigan.



The assembled project. Students with artistic inclinations can design and execute silhouettes.

PRACTICALLY everyone is fascinated by the beauty of art-metal work which is well conceived and executed. No course offers the opportunity that machine-shop practice does for allowing the student to combine his artistic talents with machine-shop abilities in the area of art metal.

An added advantage of the art-metal project is that it affords the instructor an opportunity to find useful and rewarding work for students when there are shop bottlenecks—machines set up for other jobs or demand by more than one student for the same machine.

In this article I shall endeavor to acquaint the reader with a serviceable and attractive project which will be a good introduction to art-metal work.

The photograph and drawing are of a set of five ashtrays which fit on a spindle. Bareness on the top tray is relieved by a silhouette of a mounted cowboy. Each tray is easily removed from the spindle as needed.

A machine lathe capable of 2000 rpm's should be used to spin the trays. Either hardwood or some metal, preferably the latter, can be used to make them. It has been my experience that no damage to the bearings of wood lathes due to thrust pressure has resulted when we used those machines. Material used in the trays should be about 16 or 18 gage.

After turning the wood or metal piece to the size needed for the trays, cut the discs and center them against the form. The tail stock with a rotary center is then brought in contact with the metal or wood. The tool holder is clamped firmly in the tool post and the carriage is brought into the desired position and locked. With the spinning bar resting against the tool post, apply even pressure against the disc, working from the center to the outside. No annealing of the metal is necessary. The base is spun on the same form. A disc is sweat-soldered on the bottom and can be covered with felt to insure against scratching furniture on which the trays might be laid.

If your student is artistically inclined, let him draw and cut out his own design for the silhouette. This is etched and soldered onto the top tray. For soldering, it is possible now to obtain a low melting-point copper rod which can be melted by torch. A number of textbooks supply silhouettes which can be used here.

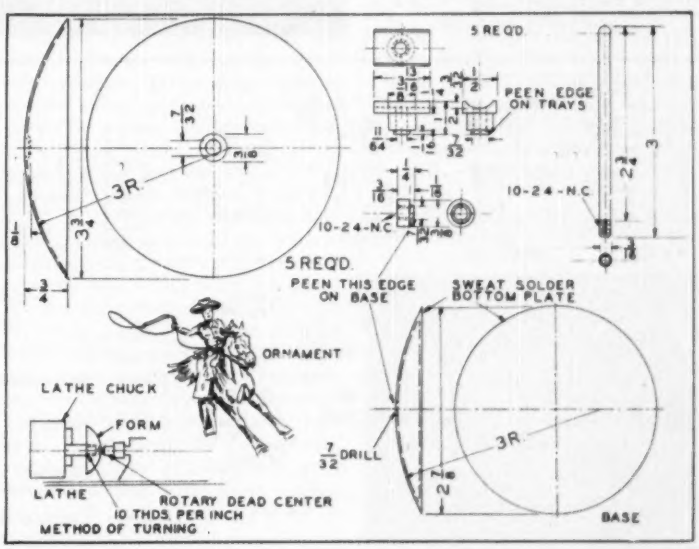
Cover the piece which is to be etched with asphaltum varnish, a fine acid resistant. Scratch desired lines in the varnish and submerge silhouette in a bath of one part nitric acid to two parts water. Check the silhouette frequently. This is necessary until the strength of the bath is known.

The cigarette holder is drilled, reamed, and turned on a lathe. The groove for the cigarette is made on either a vertical or horizontal mill. Using an end mill or a cutter with the desired radius, hold the piece in a vise. Fine emery cloth, crocus cloth, or steel wool is used on all trays to remove blemishes.

The trays are reversed on the form so that the inside surfaces can be relieved of possible defects.

The cigarette holder is peened to each tray as is the spindle holder peened to the base. The pieces are then buffed and polished. If a color effect is desired on the metal, either acid dips, such as three ounces of nitrate of iron and one ounce of sulphocyanide of potassium to two quarts of water, or heating evenly in a furnace or with a torch will produce some very beautiful metallic colors. A little experimenting along these lines will produce a satisfactory color effect.

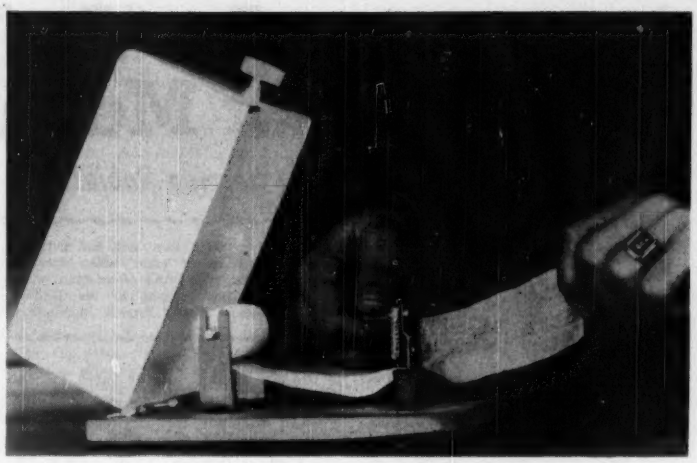
Each piece is dipped in lacquer and allowed to drain without causing any runs. After proper drying, reassemble the project.



Bandage Cutter

By Clarence A. June

Ingenuity went into the design of this project which requires work in several shop areas. Clarence A. June teaches at the J. M. Wright Technical School, Stamford, Connecticut.



The gauze bandage cutter in operation.

SUCH questions as: Where are the scissors? Where is the bandage? around the school shop or in the home can be eliminated by the use of the cutter described here. This device is an extremely handy item to have in the first-aid kit in the school shop and is an excellent take-home project as well.

The construction of this item offers opportunity for correlation of the machine, sheetmetal, and woodworking shops of the school.

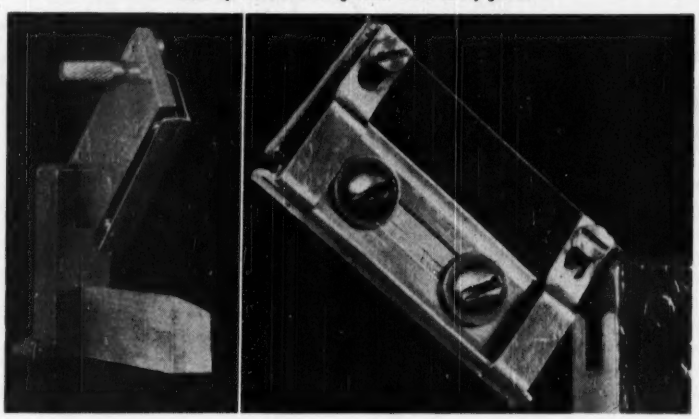
The project consists of three separate assemblies. First is the cutter, which includes a safety guard. Second is the bracket for holding the gauze, and third is the base and cover.

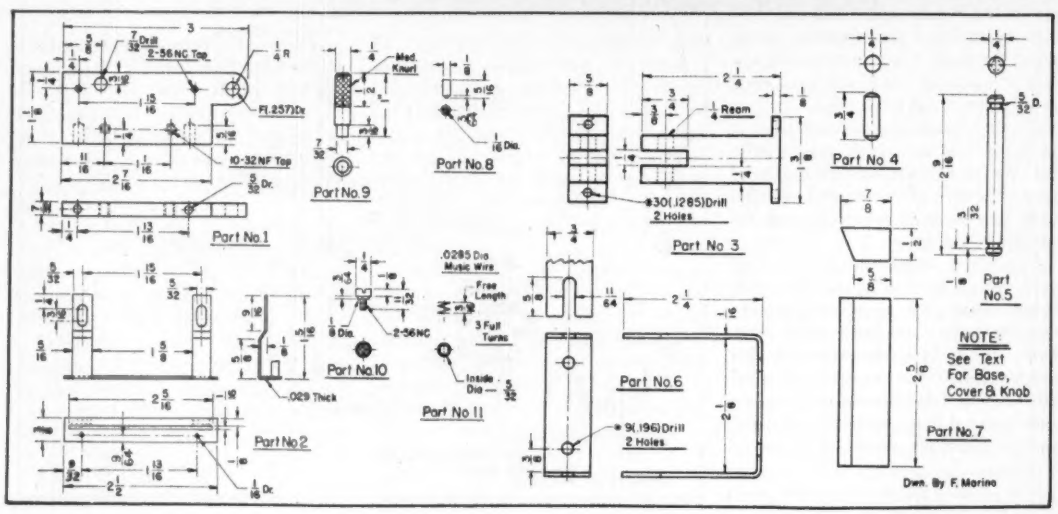
The cutter unit is an excellent machine-shop project. Parts No. 1, 3, 4, 8, 9, and 10 are made of cold rolled steel. The handle (part No. 9) is a drive fit in part No. 1. Hinge part No. 1 to part No. 3 with hinge pin (part No. 4). This cutter head and cutter bracket may be painted any desired color.

Attach to this assembly a safety-razor blade of the straight-razor type such as

(*Continued on next page*)

Close-up views of cutting head. Note safety guard.





a Durham Duplex with two No. 10-32 nf round-head machine screws, ¼" long, with washers under the heads.

The guard for the cutter head (part No. 2) is made of stainless steel and the end view of the drawing shows the spring guide (part No. 8) riveted in place. Slip the springs (part No. 11) over the guides, insert guides in holes in bottom of part No. 1, and then fasten guard to part No. 1 with the shoulder screws (part No. 10) which have a 3/64" wide by 1/16" deep screwdriver slot in the head which is not dimensioned on the detail.

This guard assembly will protect the operator from accidental cuts when it is in an open position, but when the blade is in cutting position, the guard will rise and allow the blade to cut the bandage.

The parts of the bandage bracket (Nos. 5 and 6) are best if made of stainless steel.

The block under the cutter head and the base should be made of hardwood, such as maple or birch. The base is 8½" long, 5" wide, and ½" thick with ¼" radii on the corners. Varnish the base and the cutter block which is placed on the base 1½" from the front. It is fastened with flat-head wood screws through the bottom. The bracket for the gauze is placed 5¾" from the front of the base and is fastened to the base from the top with round-head wood screws. Cover the bottom of the base with ⅛" thick felt.

The cutter assembly should be mounted alongside the cutter block so that the razor blade is 3/16" from the high point of the block. The assembly can be fastened with round-head wood screws from the top.

The cover is made from No. 22 gage sheetmetal. The overall dimensions are 7" long, 4½" wide, and 3" high. Fasten two small hinges at the rear of the cover. The knob on the front of the cover may be a purchased small-sized drawer pull or may be turned from some nonferrous metal. Paint the cover inside and out. Locate it so that it is free on all sides of the assembled parts on the base and fasten it to the base with wood screws through the hinges.

When the student completes this project, he will have a unique item for the medicine chest as well as having had a number of worthwhile training experiences in various shops.

Share Your Ideas!

SCHOOL SHOP is looking for good project and teaching-technic articles. Drop us a card asking for "Pointers" on preparing material. Address the Editor, SCHOOL SHOP, Ann Arbor, Michigan.

Walter E. Durbahn, Head of the Vocational Education Department, Deerfield-Shields Township High School, Highland Park, Illinois, sharpening a plane iron on his Chicago television show.

Shop Teacher Makes Hit on Television

AT THE time Walter E. Durbahn was suggested to NBC as a television program possibility, there was a certain amount of frank skepticism about the success of such a program.

In the first place, one thing that program men know about television is that it must have a high degree of entertainment value or some other strong interest-getting factor or the audience will dial away from it in droves. In view of this well-founded observation, it was reasonable to be on the skeptical side when confronted with a program idea offering nothing more than the sight and sound of a shop teacher occupied in what passed for a home basement workshop.

But Walter Durbahn, whose normal habitat is the Deerfield-Shields Township High School, Highland Park, Ill., where he is head of the Vocational Education Department, proved that it is certainly possible to turn such fare into a television hit. Walt's Workshop, heard Monday nights at 9:00 P.M. CDT over WNBQ in Chicago, has held its audience spellbound over such things as repairing a screen, building a flower box, making wood turnings, upholstering a chair seat, and kindred home workshop business. The success of the program produced two events: an enthusiastic sponsor, in the form of the Edward Hines Lumber Co., and a flock of not wholly successful imitations.

One fact that might easily be missed in this story is that much of the success of the venture depends on the audience-wise characteristics of Walter Durbahn. Years spent as a teacher of shop subjects have given him an easy approach to an audience, whether it consisted of a classroom full of youngsters or a city full of television viewers. A dry sort of humor aids his approach and this, coupled with an easy and lucid explanation of the project at hand, conspires to make Walter Durbahn and his subject excellent television fare.

Durbahn has proved that school shop activities can be successfully televised. The adult-education aspects of this type of program indicate a promising future for shop demonstrations over the air.

Mr. Durbahn beginning a demonstration in front of the TV camera on his Walt's Workshop program.

Plastic Letter Opener Piques Pupil Interest

By John R. Cunnea

This is a good project for introducing plastics. John R. Cunnea teaches at the Volta School, Chicago, Illinois.

1. Cutting the plastic to shape.
2. Filing the rough edges.
3. Sanding a smooth edge.
4. Drilling hole for saw blade.
5. Sawing slot in handle.

THIS letter opener was found to hold a high degree of interest for both boys and girls on the seventh and eighth-grade level of the elementary school. While it is within the capabilities of this age group, it is also sufficiently challenging for first-year high-school boys in the industrial-arts laboratory. More talented pupils in the eighth grade gained creative experience by designing a letter holder with the same motif.

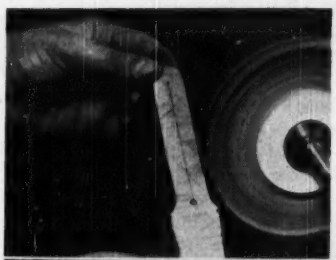
The material used is ⅛" clear Plexiglas and while the pattern suggests a length of 9" that dimension may be decreased in the interests of obtaining more pieces from a given sheet of plastic. This design was originally evolved to make use of some scrap wedge-shaped pieces which were obtained from a local factory for 2½c each. Thus all dimensions are suggested and only the main features of the design need be followed.

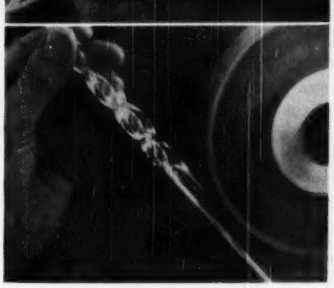
The making of this project was introduced with a teacher demonstration. The skill of following printed directions was stressed by putting into the hands of each pupil a mimeographed job sheet with steps corresponding to each of the accompanying photographs. It was felt that learning to follow printed directions in a precise and methodical manner is an invaluable achievement in this or any other area. During the time that the children were engaged in making the project the photographs were posted on the bulletin board and each child had his individual job sheet. The author took specific care not to answer any question regarding sequence of operations to which there was an answer set forth in the directions.

The first step involves transferring the pattern to the Plexiglas and cutting the outline either with a coping saw or on a scroll saw.

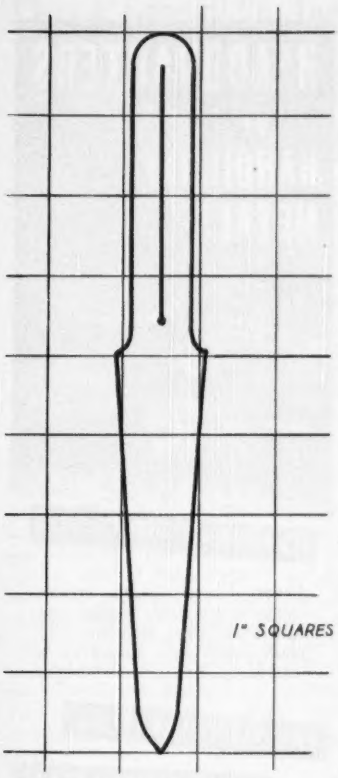
Steps No. 2, 3, and 4 are concerned with producing a clear edge on the handle. The edges of the blade need not be finished since they will later receive a sharpened edge.

It is important that the instructor set up a definite sequence to be followed in finishing plastics. If the pupil attempts buffing before sufficient preliminary filing and sanding have been done, the results will be disappointing to him. A suggested procedure is to employ successively a file, coarse garnet paper





6. Buffing the handle.
7. Twisting the handle into shape.
8. Grinding double edge on blade.
9. Final buffing operation.



(about no. ½), fine garnet paper (about no. 2-0), and final buffing with Tripoli compound.

The next operation is to drill a hole at the point indicated on the pattern in order that an inside slot may be cut. If a coping saw is to be used for cutting the slot, a hole of about ⅛" in diameter will be required. However, a neater job can be done by the older children if a similar hole is drilled and a jeweler's saw is used for cutting the slot. The final buffing of the handle will be facilitated if the inside of the slot is smoothed by slipping a piece of sandpaper back and forth in it.

Forming the handle to effect a double twist is the most interesting operation in the making of this letter opener. The handle section is heated until the plastic is thoroughly pliable. (The heating may be done over a gas flame. A better device for heating small pieces of plastic is an ordinary infra-red heat lamp rigged in an inverted 50-pound lard pail set up on 2" legs.) When the plastic is ready to bend, the end of the handle is pushed through the slot two times; then it is drawn out straight and allowed to cool.

A coarse carborundum abrasive wheel on one side of a double arbor is ideal for grinding plastic to shape. It is fast-working and holds up for a long time. It is this device that was used to grind a double edge on the letter opener. Final finishing includes performance of the previously-mentioned plastic polishing sequence on the blade and on the parts of the handle which were turned out by twisting.

Trade School Sponsors Auto Show

The Newton, Mass., Trade School and the Automobile Dealers' Association presented the city's first automobile show recently in the new Trade School garage.

Convention Calendar
1949-1950

November 4 and 5, **New England Industrial Arts Teachers Association,** Providence, R. I.

November 12, **New Jersey Vocational and Arts Association,** Atlantic City.

December 6-10, **American Vocational Association,** Atlantic City, N. J.

February 23-25, **Ohio Industrial Arts Association,** Columbus, Ohio.

March 30-April 1, **Illinois Vocational Association,** Chicago, Ill.

May 11-13, **American Industrial Arts Association,** Cincinnati, Ohio.

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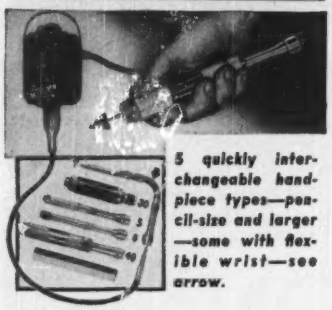

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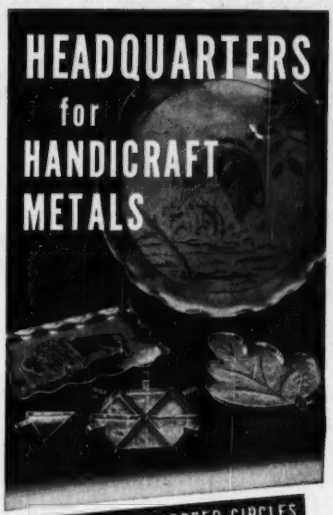
ABOUT YOUR FELLOW TEACHERS

NORMAN B. CARR is now serving as a specialist in industrial arts with the education division of the Institute of Inter-American Affairs. He is aiding the government of Guatemala in the development of an industrial-education program in its schools . . . THOMAS L. HANKINS, head of the department of industrial education, University of Kentucky, Lexington, has been named director of the University's Northern Extension Center at Covington . . . WILLIAM J. MICHEELS, associate professor of industrial education, University of Minnesota, Minneapolis, is serving as visiting expert in a demonstration school in Bavaria, U. S. Zone of Germany . . . WILLIS B. ANTHONY, who retired in 1947 from Fitchburg, Mass., Teachers College after 38 years of service, died recently . . . LAWRENCE W. TICE has been named to succeed RALPH E. WEEKS as president of the International Textbook Co., Scranton, Pa. . . . The new head of the department of industrial arts at Southeast Missouri State Teachers College, Cape Girardeau, is A. G. WILLIAMS. Also named to the department staff was GRAHAM WAGONER . . . Announcement has been made of the appointment of GEORGE M. HALPERN as director of the Fieldston School, New York City . . . PATRICK J. SMITH retired recently as coordinator of the printing department of the Roxbury, Mass., Memorial High School . . . Vice-president in charge of sales for the Power Tool Division of the Rockwell Mfg. Co., Pittsburgh, Pa., is now ROBERT P. MELIUS . . . The new head of industrial arts at Great Bend, Kas., High School is HARRY STARKEY . . . ALBERT J. FEIRER and LUCIEN PAULUS have been named director of trade and industrial education and supervisor of industrial arts respectively for the Territory of Hawaii . . . According to a New York City Board of Education announcement, FERDY J. TAGLE has been appointed principal of the New York, N.Y., School of Printing. He succeeds J. HENRY HOLLWAY, retired . . . CHARLES RUGH, a representative in the East for the American Technical Society, died recently . . . JOHN G. MILLER, Playa del Rey, Calif., completed a tour of duty recently for the Education and Cultural Relations Division, OMGUS, Germany.

HEADQUARTERS for HANDICRAFT METALS



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Chas A. Bennett Co., Inc. Is New Name Taken by the Manual Arts Press

OLD- and youngtimers alike in industrial arts will welcome the news that further honor has come to the name of Charles A. Bennett with the changing of the firm name of the Manual Arts Press, Peoria, Ill., to the Chas. A. Bennett Co., Inc.

The Manual Arts Press—which, incidentally, has never owned a press of any sort—is making the change out of tribute to its founder, the late Charles A. Bennett, and to mark a half century of its existence.

Bennett died in 1942, leaving behind him a distinguished history of activity in industrial-arts teaching, editing, and publishing that had earned him the informal title of "grandfather" in the field. He founded, under the title of *Manual Training Magazine*, what later came to be called the *Industrial Education Magazine*. A pioneer in the field of textbooks for shop teachers and students, Professor Bennett wrote, edited, and published a number of outstanding books.

Directors of the Chas. A. Bennett Co. Left to right: Richard H. Simpson, vice-president and treasurer; Paul H. Van Winkle, editor; Laurens L. Simpson, president and chairman of the board; Minnie M. Deeche, secretary; and Howard M. Simpson, advertising manager. Charles A. Bennett is shown in the photograph above the fireplace.

Bennett's successor at the Manual Arts Press, Laurens L. Simpson, has been managing the business affairs of the company for 42 years.

This honor follows on the heels of another for the late educator-editor. The Bradley University Division of Industrial Arts and its Technical College have recently merged under the name of Bennett College. Charles A. Bennett was Professor of Manual Arts at the then Bradley Polytechnic Institute.

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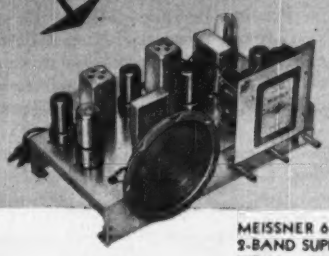

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News

HAPPENINGS IN INDUSTRIAL EDUCATION

New York First

THE first state to set up a Bureau of Industrial Arts Education is New York, according to word reaching us from the New York State Education Department, Albany. Roy G. Fales is acting chief of the bureau which is one of three in the Division of Industrial and Technical Education. Dr. Fales and his assistants will be "charged with the responsibility of encouraging and providing guidance and technical assistance to public schools and communities in the organization and functioning of industrial-arts work in the public schools of the state."

Printing Conference

REPORTS of the 24th annual Conference on Printing Education held at Pressmen's Home, Tennessee, in June indicate that it was highly successful. The meeting marked the first time that the International Printing Pressmen and Assistants Union of North America and the National Graphic Arts Education Association, the professional organization of printing teachers, worked together on a graphic arts educational conference. Forums and exhibits featured the five-day meeting. John G. Henderson, Washburne Trade School, Chicago, Ill., was reelected president of the Association.

California Note

OLEN D. DAVIS has been added to the staff of the California State Bureau of Trade and Industrial Education as Consultant in Industrial-Arts Education. The new position was set up to provide assistance and advice to local school districts on industrial-arts programs.

More on IPI Contest

ADDITIONAL information on the 14th annual essay contest sponsored by the National Graphic Arts Education Association in cooperation with International Printing Ink, has been received. Extra prizes this year will total $500 for the best designs for the new Certificate of Honor, the document given each year to the teachers who make the contest possible. Deadlines for typewritten and printed essays are January 14, and February 14, 1950 respectively. Deadline for the certificate design is also February 14. Essays should be sent to Mr. Fred J. Hartman, Educational Director, National Graphic Arts Education Association, 412 National Savings and Trust Building, 719 Fifteenth St., N.W., Washington 5, D.C. Send design entries to Certificate Award Committee, International Printing Ink, Div. of Interchemical Ink, 350 Fifth Ave., New York 1, N.Y.

Upgrading Wiggins

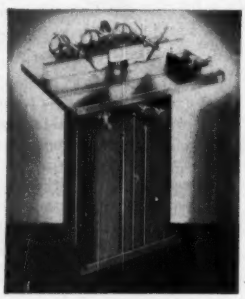
A NEW title, Los Angeles Trade-Technical Junior College, Frank Wiggins Trade School, has been given to the Frank Wiggins Trade School, Los Angeles, Calif. The school will continue to offer trade-preparatory education. Students will be able to secure an Associate in Arts degree under the new set-up by taking a major in a trade or occupation and a minor in an academic subject.

East Meets West

WHEN Gordon O. Wilber, Director of Industrial Arts, Oswego, N.Y., State Teachers College, visited SCHOOL SHOP recently, he reported that he had met E. E. Ericson, Professor of Industrial Arts, Santa Barbara College of the University of California, while each was engaged in a cross country tour. Both educators are planning to visit teacher-training institutions and other centers of industrial-arts activity. Their paths crossed at Ball State Teachers College, Muncie, Ind.

THE ONLY SHAPER

having ½" and ¾" cutter-arbors formed on a solid one-piece vanadium-steel spindle—stronger, more accurate and safer than any 2-piece type.



BOICE-CRANE No. 2120 SPINDLE SHAPER

Merely invert the quill to change from ¾" to ½" arbor without special tools. Large capacity. Runs wide mouldings and raised panels in one cut, and with our Ogee Sash Cutter Sets makes commercial grade sash with perfect fitting coped joints.

Large 1" diameter precision ground spindle, carried on two high quality dust and grease sealed ball bearings, stays true even after years of running wide, deep cuts. The bearing-seats in the quill casting, as well as the entire body of quill, are all finely ground to precision dimensions.

The table features a large opening with provision for nested table rings, with these advantages: (1) all cutters, up to 6¼" diameter lower below table to undercut for greater safety; (2) undercutting lessens danger of springing spindle; (3) undercutting brings cutters closer to spindle bearings to reduce strain and wear.

SPECIFICATIONS

Table (has 1 miter-gauge groove): 20" x 27½"
Table with Front Wing: 28" x 27½".
Table-Opening Diameters: 6¼", 3½" and 2".
Widest Bevel Edge Knife Capacity: 3½".
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Largest Diameter Cutter Capacity: 6¼".
Vertical Spindle Travel: 1¾".
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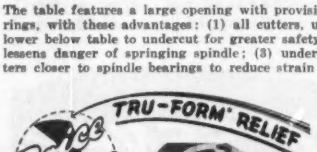
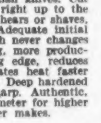


First correctly made milled-to-pattern shaper cutters at moderate prices. Real production-type two-wing cutters with the advantages of costlier CIRCULAR or INVOLUTE* relief. This new principle machines the shape into the cutter on an arc that assures clean cutting without burning. Safer than knives. Cut the same true original shape and dimensions, right up to the last sharpening. Larger rake, or cutting angle, shears or shaves, doesn't scrape. Up to 50% more usable life. Adequate initial clearance angle for higher spindle speeds, which never changes when properly sharpened. Result—faster cutting, more production, cleaner cuts. More metal behind cutting edge, reduces chipping, crumbling, under heavy cuts; dissipates heat faster on high speed shaping. Fine, tungsten tool steel. Deep hardened and oil tempered. Precision formed. Razor sharp. Authentic, full-sized commercial shapes. Average 3¼" diameter for higher peripheral speed. Designed for the rugged Boice-Crane shaper but improves performance in all other makes.

(*Also called flattened-arc relief; cam-profiled relief.)

BOICE-CRANE FRICTION-MATIC WET TOOL GRINDER



Sharpens hand tools without danger of damage to tools or personal injury. Simplified self-adjusting friction roll drive. Peripheral speed remains constant as wheel wears. No water thrown on operator. Permits proper pressure control. Operator takes a comfortable standing position and works on top of the wheel. Large tool rest, the first with adequate adjustment.

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This is how Chic Young, the cartoonist, makes a first rough sketch for the famous strip.

BLONDIE! LOOK AT ALL THESE BILLS!
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I'VE TOLD YOU A MILLION TIMES... WITH U.S. SAVINGS BONDS!
JOIN THE PAYROLL SAVINGS PLAN AND WE'LL GET $4.99 FOR EVERY $3.99 IN JUST TEN YEARS!

Then when each panel in a strip meets his approval, he makes a careful pencil rendering as above.

BLONDIE, LOOK AT ALL THESE BILLS!
HOW ARE WE GOING TO SAVE MONEY?
I'VE TOLD YOU A MILLION TIMES... WITH U.S. SAVINGS BONDS!
HUM!
JOIN THE PAYROLL SAVINGS PLAN AND WE'LL GET $4.99 FOR EVERY $3.99 IN JUST TEN YEARS!

After this, the pencil rendering is carefully inked in, as you see here.

STEP BY STEP...

that's the way it's done successfully!

As you can see, Chic Young, who draws the popular "Blondie" comic strip, goes through many steps to arrive at a finished cartoon.

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AUTOMATIC SAVING IS SURE SAVING—U. S. SAVINGS BONDS

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Teaching Tools

POINTERS ON INSTRUCTION and SHOP ADMINISTRATION

By John F. Nowak

Toilet Pass IT is inevitable that during a shopwork session body relief should become a necessity for some students. In an instance of necessity, a request to visit the toilet is legitimate for a student to make during instruction time. The visit to the school toilet, however, may become an abuse of personal privilege if attention is not given by the teacher to the frequency factor in the case of some students.

As a general practice, no more than one student is permitted to be out of shop on toilet pass at one time. And most school regulations prescribe the use of a means of identification of destination for students in transit during instruction periods.

The teacher, then, has these responsibilities in connection with each student request for a toilet pass: (1) to provide the pass, and (2) to control its use.

During instruction time, shop teachers normally are quite busy with either group or individual instruction. An interruption of teaching in order to prepare a pass is an additional chore which many teachers sidestep by preparing a carrier which is made of wood or metal and is hung from a nail or hook in the vicinity of the teacher's desk. A student who desires to visit the toilet waits for the carrier pass to be returned (if it is in use) and goes out without asking permission when he secures it.

The foregoing common practice is undesirable for two reasons: (1) easy access to the pass is often an invitation to some students to smoke, and (2) a teacher does not know, unless he counts heads, who is using the pass.

A simple-to-prepare, easy-to-control toilet pass arrangement for shop teachers is recommended:

Obtain a card case with a single window, similar to those used by motorists for drivers licenses. In schools where the use of a printed pass is mandatory, the teacher can prepare a single pass before the morning session begins. This can be used for the entire day. If placed in the card case, all the pertinent information on the card may be read at a glance. In situations where the printed form type of pass is not required, the teacher can write the information on a 3" x 5" card and trim it to fit the case.

Regarding the control of the toilet pass, the card case arrangement is convenient as it can be kept in the teacher's shop coat when not in use. A student must consult the teacher in order to leave the shop regardless of circumstance. With the pass in the teacher's possession, identification of each user is automatic.

Questions and Answers

Q. Where two teachers are paired together in a double space unit shop at the same time, which teacher is responsible for the shop as a whole? W. D. K.

A. Responsibility is shared equally by both teachers; however, in routine matters of shop administration, the usual practice is for the more experienced teacher to act as "head man."

Q. Where two teachers are assigned to the same shop, one AM and the other PM, which is responsible for shop inventory? P. E.

A. Both teachers are equally responsible and inventory should be a cooperative undertaking.

Question Box

As a complement to this department, readers are invited to send in questions which relate to methods of teaching shopwork. If a personal reply is desired, include a stamped, selfaddressed envelope. Send questions to:

John F. Nowak
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A Sulphate "Solution"

Soft soldering on some surfaces can be a problem at times. The stuff just doesn't stick, even when the book says it should. When it happens on one of those jobs that is not too important, try copperplating the spot with a dab of copper sulphate dissolved in water. After it has been allowed to dry, apply solder as usual. Now, don't get the idea that you have just read a cure-all for solder trouble. This is a trick that should be used as a last resort. It can be a big help.—*Paul C. Hoopes, Abraham Clark High School, Roselle, New Jersey.*

In the Groove

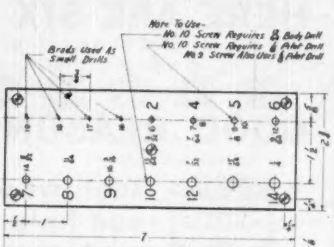
Many metal shop teachers use wooden molds for forming ashtrays, plates, bowls, etc. Even when made of a good hardwood, these molds often last but a short time because they split after some use. I have increased the life of these molds by sawing a groove ¾" x ¾" across the end grain and gluing a tight-fitting piece of hardwood in this slot. When treated in this manner, molds will last a long time.—*Marcellus Jones, Ontario, California, Junior High School.*

Numbered Drill Stand

Getting students to use the proper size drill for wood screws is always a problem in the industrial-arts shop. Charts which list the sizes are of some help but we found the method below to be much better.

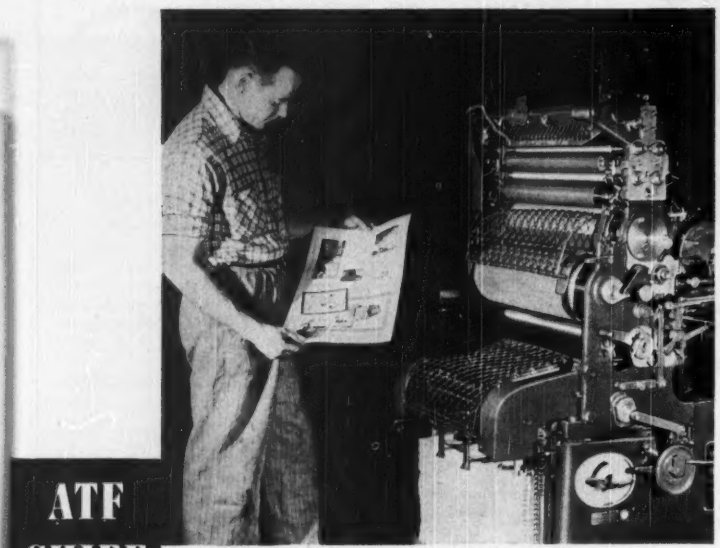
We constructed our own drill stands by fastening a piece of ⅛" thick aluminum to a block of hardwood with flat-head wood screws. Without the aluminum facing, the holes in which the drills are placed soon wear to the point at which it is possible to insert the wrong drill in the space. The centerlines of the holes are then laid out with at least 1" between them. The holes are then drilled so the shanks of the drills to be held fit snugly but do not bind. Probably it will be necessary to use a set of numbered drills to obtain a slight clearance for this purpose.

Next the fractional drill sizes are stamped on the aluminum close to the holes to which they relate. A large number stamped beside a hole indicates that that drill is used for the shank size of the wood screw to which the number refers. Similarly, a small number indicates the pilot drill size for that number screw. (See drawing.) The pilot holes may have to be averaged for hard and soft woods to avoid too many numbers and the confusion which might result. The fact that larger numbers indicate shank size emphasizes the point that two sizes of drills are necessary to drive wood screws successfully.



Students are usually able to use the drill stand correctly after one or two demonstrations. — *Herman A. Mock, Kutztown, Pa., High School.*

SHARE your teaching secrets with others. Send in *Kinks* for use in this section.



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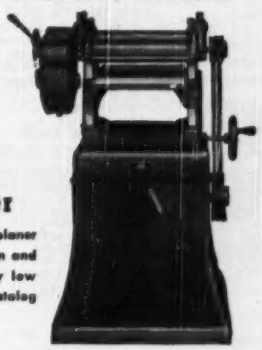

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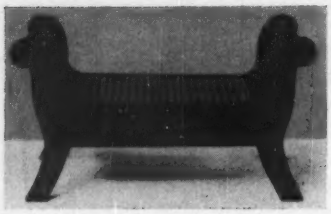


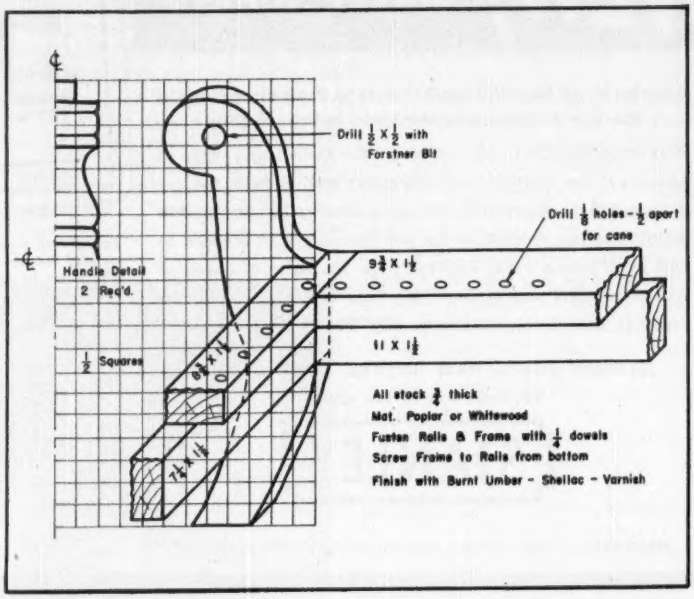
By George E. Schuster

Gaskill Junior High School, Niagara Falls, New York

TESTED SS PROJECT

THIS project was designed specifically for an atypical group where handwork is part of the daily program for them. This class, as is usually the case with such a group, is more or less limited to work with the jigsaw and some hand tools. It can also be used, of course, in elementary general shop programs and, if desired, the caning part of the project can be assigned to the atypical group. This project requires the use of a number of tool skills and is also appealing and serviceable.

We have made a number of these stools in both regular industrial-arts classes and in classes for the atypical.


Drill ½ X ½ with Forstner Bit
Drill ⅛ holes - ½ apart for cane
Handle Detail
2 Req'd.
½ Squares
9¾ X 1½
11 X 1½
All stock ¾ thick
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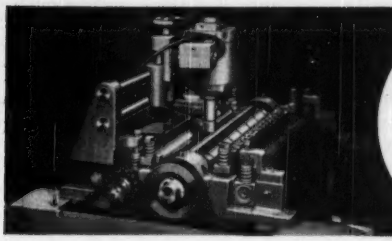

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Foundry . . . . . *from page 6*

industry except for size.

Early in 1949 the Board of Education formally accepted from the Donor's Committee, representing over 50 western Michigan companies engaged in foundry and related industries, a completely rehabilitated foundry which will enable the Hackley Manual Training School to offer comprehensive training in the art and science of casting metals.

Muskegon did not relinquish the advantage which industry cooperation had produced; the help of the Western Michigan Chapter of the American Foundrymen's Society was asked to provide special advisory subcommittees to give assistance to and advise the manager-instructor. Subcommittees with rotating membership have been appointed to serve in each of the following classifications of foundry operation: general, sand and sand mixing, sand laboratory, core-making, molding, patterns, melting and pouring, cleaning, inspection, electrical equipment, mechanical equipment, purchasing, chemical laboratory, and time standards.

This continuity of interest and cooperation on the part of industry is one of the most significant aspects of the program in view of the fact that one of the reasons the foundry department was dormant for 18 years was that industry did not properly support the school's efforts in foundry training. Muskegon foundrymen are determined that this shall not occur again.

A comprehensive course has been prepared, covering the various subjects to be studied by foundry students. General titles of the topics to be treated in detail include the following: introduction, covering such items as safety and good shopkeeping, general description of the history and importance of cast metals, types of products, and duties of different foundry personnel; foundry terminology; foundry tools and equipment; foundry flasks and rigging; patterns; foundry sands; sand handling and processing; sand testing; fundamental principles of molding; sequential steps in molding; machine and bench molding; melting equipment; cupola theory and operation; electric furnace theory and operation; refractories and fluxes; nonferrous furnace operation; metal handling; coremaking; casting cleaning; casting inspection; elements of metallurgy. Students taking the foundry course are encouraged to elect chemistry and physics as related courses.

Specialization in the foundry program does not start for students until the tenth grade at the earliest. The Hackley Manual Training School offers a balanced curriculum of academic and vocational training. All students in the seventh, eighth, and ninth grades are required to take general shop. Nine units of exploratory work are offered in drafting, woodworking, sheetmetal, printing, pattern making, electricity, bench metal, and foundry. The units vary in length and the training is of an elementary nature to give pupils knowledge of various occupational areas.

By the time the student has reached the tenth grade he can begin to consider the trade he likes best, based on his general shop experience and aided by counseling and guidance. If he elects to follow a vocational course at this time, he may elect two unit courses or one semester of drafting, pattern making, foundry, and machine shop to complete the "industrial cycle."

Foundry training at this level is limited to one hour a day and consists of study of the fundamentals of foundry work, preparatory to the entrance of the student into the vocational foundry course in the eleventh grade. If he follows this procedure, he takes half-day instruction in all the foundry operations, as well as thorough training in laboratory technic.

Thorough preparation at this level is of value to the student in the twelfth grade where he takes another advanced course of three hours each day in foundry practice. He may elect to enroll in cooperative or apprentice training in the field of his choice during the twelfth grade in place of vocational shop.

This same procedure is followed for all vocational students. Other trade areas in which training is given include pattern making, drafting, machine shop, printing, sheetmetal, electricity, cabinet making, welding, automotive mechanics, arts and crafts, and commercial art.

The three-year course in vocational foundry is as follows:

First Semester	*Second Semester*
Tenth Grade	
English ____½ unit	English ____½ unit
Mathematics ½ unit	Mathematics ½ unit
Drawing ____½ unit	Foundry ____½ unit
Pattern Mak. ½ unit	Mach. Shop __½ unit
Eleventh Grade	
English ____½ unit	English ____½ unit
Shop Sci. ____½ unit	Shop Sci. ____½ unit
Day Trade ___ 1 unit	Day Trade ___ 1 unit
Twelfth Grade	
Metallurgy __½ unit	U.S. His. ____½ unit
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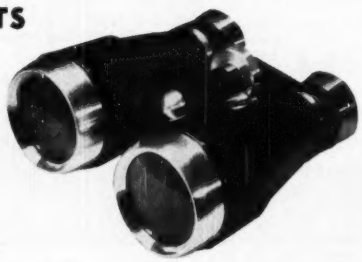

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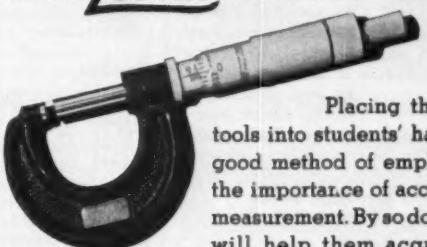

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Instructional RESOURCES

Books:

Visual Aids—Their Construction and Use. Weaver and Bollinger. New York: D. Van Nostrand Co., Inc., 1949. Pp. 396. $4.75.

The authors of this comprehensive work point out in the preface that visual aids are too frequently limited in definition to motion pictures and slidefilms. They outline the nature and function of those teaching aids which make their appeal to the sense of vision, and give needed suggestions for embodying such aids into the vocational education program. Their illustrations cover pictures, graphs, charts, models, and other types of aids designed to aid learning through vision. Gilbert G. Weaver is Director of Training, and Elroy W. Bollinger is Professor of Industrial Teacher Training, New York State Education Department.

Training Employees and Managers. Planty, McCord, and Efferson. New York: Ronald Press Co., 1948. Pp. xiii+278. $5.00.

"Training" and "Education" being, in the view of the authors, synonymous, this is a book concerning the continuous education of workers and managers. It should be of value to guidance directors and teachers. It outlines principles of good training programs in industry, and cites examples of the aims and accomplishments of some now in operation. Part one defines training and its possibilities. Part two concerns organizing, installing, and administering a program, and part three covers operation of teaching programs.

Earl G. Planty is an executive counselor, William S. McCord is a director of industrial relations, and Carlos A. Efferson is a training director.

Meet the Plastics. Robinson. New York: The Macmillan Co., 1949. Pp. x+172. $3.75.

This is a work intended to give an overall view of the plastics world and to avoid the extravagant claims which are sometimes made concerning plastics. The author's aim is to reduce the complexities of the plastics family to easily-read language. There is a chapter devoted to opportunities in the industry. Lists of plastics manufacturers and of schools at which plastics instruction may be gotten are appended.

Clark N. Robinson is a partner in Robinson-Howell Co., San Francisco, Calif.

Auto Radio Manual. Sams. Indianapolis, Ind.: Howard W. Sams and Co., 1949. $4.95.

This is one of the Howard W. Sams PHOTOFACT publications. It contains in one volume the service data for almost all car radios produced since the end of the war. The information concerning each model of automobile radio was obtained in the laboratories of the publisher. There are many photos and diagrams, all of which are clearly marked. There are hints at the end of the book for successful operation of an auto radio service business.

Basic Electrical Principles. Suffern. New York: McGraw-Hill Book Co., 1949. Pp. ix+430. $3.20.

Fundamentals of the trade are given in this book for students at the vocational school level. The approach is a practical one throughout—formulas are omitted whenever possible. The author makes frequent use of drawings for explanations of electrical principles.

Maurice G. Suffern is a Major in the Ordnance Department, AUS.

Fundamentals of Soft Soldering. Yerkow. Peoria, Ill.: The Manual Arts Press, 1949. Pp. 96. $2.25.

This is a text which can be used either for selfinstruction or as an adjunct to shop instruction. There are many clear photographs which are arranged in logical order of learning for students.

Charles Yerkow was formerly supervisor-instructor of soldering, Hammarlund Mfg. Co.

Magnetic Recording. Begun. New York: Murray Hill Books, Inc., 1949. Pp. x+242. $5.00.

This is a rather detailed survey of the expanding field of magnetic recording. The opening chapter includes a short history of the art. There are good chapters on magnetic recording theory, devices, and on specific pieces of equipment. There are bibliographies at chapter ends.

S. J. Begun is Vice-President and Chief Engineer, The Brush Development Co.

Creative Art Crafts. de Lemos. Worcester, Mass.: The Davis Press, 1948. Pp. 87.

This is book three in the series and covers the following crafts areas: weaving, raffia, basketry, textile arts, plastics, jewelry design, pottery, cement art, sculpture, puppetry, masks, stagecraft, marionettes, costuming, pageantry, and sandtable projects.

Pedro deLemos is editor of *School Arts* magazine.

Metal Art Crafts. Miller. New York: D. Van Nostrand Co., Inc., 1948. Pp. vii+165. $2.20.

This volume shows how to work with metals and it supplies projects which can be produced by anyone who is equipped with the proper tools and who can follow the simple directions.

John G. Miller is Instructor in Education, Department of Vocational Education, New York University School of Education.

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Pamphlets:

Occupational Outlook Information—Printing Occupations is a Veterans Administration pamphlet which offers long-range employment prospects by state and region for the graphic arts industries. The pamphlet is in two sections. Part one is a general discussion of work possibilities for the country as a whole in the printing industries. Part two includes separate employment outlook statements for regions and states. The pamphlet may be secured from the U. S. Government Printing Office, Washington 25, D. C. Ask for VA Pamphlet 7—4.10.

Guide for Industrial Arts Education in California is the September, 1949, *Bulletin* of the California State Department of Education, Sacramento. Prepared by the California Committee on Industrial Arts Education, the bulletin does not aim at a detailed description of all elements of the program, but "a basic framework has been presented which should be interpreted and applied in terms of local conditions and facilities," according to Roy E. Simpson, State Superintendent of Public Instruction who wrote the *Foreword.* Contents include sections on industrial arts in education, in California, and at various grade levels in the state schools. There is also a section each on organization and management of school shops and on teacher preparation.

How to Make Modern Archery Tackle is a 40-page pamphlet by Tracy L. Stalker, one of the editors of *Archery* magazine. It covers in detail the making of bows, bowstrings, and arrows. Of particular value are the descriptions with illustrations of various jigs and fixtures which have made the production of archery tackle a real craft. Available for $1.00 from the Casein Company of America, 350 Madison Ave., New York 17, N. Y.

Teacher's Guide to Metalwork Publications and Reference Material is a partial list of publications and teaching aids which would be useful to teachers of metalworking. The listings are comprehensive and cover all areas from abrasives to welding. In addition to the names and sources of textbooks and pamphlet materials, a list of films is also given. Of particular value is the extensive list of sources of instructional materials which are available from various industrial concerns. Compiled by Raymond F. Gerfen, the bulletin is available without charge from the Public Relations Office, Bradley University, Peoria, Ill.

Visuals:

The Training Film Annual is the first number of the catalog which will list the latest in sound slidefilms on training and instruction. There are suggestions for using these "ready-to-use" programs in training. Classifications include commercial, industrial, school, and church films.

The catalog may be purchased from Commercial Films, Inc., P. O. Box 7, Cleveland 21, Ohio, for $1.00 which is credited on the first film or equipment purchase made through the publisher.

What Is Electricity? is a 20-minute, black and white sound motion picture which is available in both 16mm and 35mm. It was produced by the Westinghouse Electric Corp. Practical facts about electricity are explained in terms that should be understandable to all. Such items as the electron theory, laws of magnetism, principles of the generation of electric current are demonstrated. Write to Film Division, Westinghouse Electric Corp., Box 868, 511 Wood St., Pittsburgh 30, Pennsylvania, mentioning SCHOOL SHOP.

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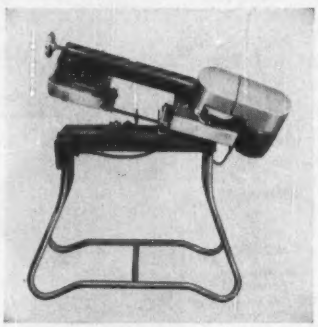

selective speeds of 54, 100, and 190 f.p.m. Bed area is 6½" x 24". Height to top of bed is 24". Floor space is 16½" x 38"; net weight approximately 118 pounds. Full details, specifications, and descriptive literature may be obtained by writing Wells Mfg. Corp., 2600 Shop Ave., Three Rivers, Mich.; *or by checking no. 10 on the coupon.*

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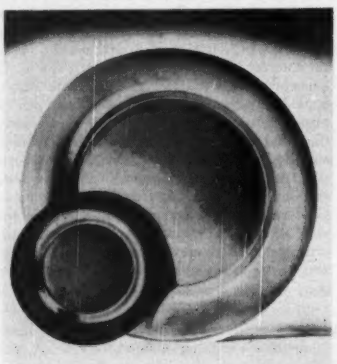

more attractive results. For more information, write to Metal Goods Corp., 5239 Brown Ave., Dept. SS, St. Louis, Mo.; *or check no. 11 on the coupon.*

Quick-Kraft Shaper Head Kit

Now it is safe and practical to teach wood and plastic shaping on a drill press with the use of this inexpensive tool kit, which contains an instruction sheet along with five single hardened steel cutters, a ½" shaft, safety guard, and wrench. Many precision shapes such as tongue and groove, inlay grooves, radii, inside lip edges, and many picture frame and table edges are quickly cut in hard or soft woods and plastics.

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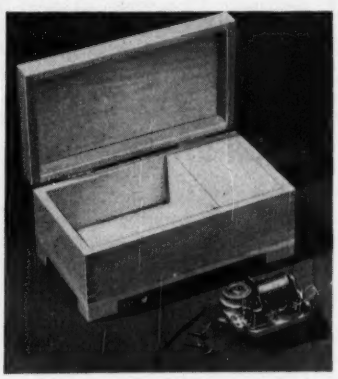
New Model DF. Detroit Easy Finisher

Smooth, vibrationless operation plus straight-line sanding, rubbing, and polishing are outstanding features of the new portable, electric model DF., Detroit EASY finisher. Straight-line sanding duplicates the natural back-and-forth motion of hand work. This action is required for most finishing applications, because it does not sand cross grain, cut swirls, winkers, or other hard-to-cover patterns. It also permits working up to moldings or right angles without marring or scratching.

For complete details write to Detroit Surfacing Machine Co., 7433 West Davison, Detroit 4, Mich.; *or check no. 13 on the coupon.*

Music Box Kit



American Handicrafts Co. offers a unique music-box kit, suitable as a project, particularly around the Christmas season.

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New Literature

Allied Radio of Chicago announces the release of a *new 1950 catalog* containing comprehensive listings of radio and electronic parts and equipment for classroom, laboratory, and shop. A large, 196-page publication, it is one of the most complete catalogs of its kind. Special emphasis has been placed on the instructional material and equipment needed by schools for their radio and electronics activity. For a free copy, write to Allied Radio Corp., 833 W. Jackson Blvd., Chicago 7, Ill.; *or check no. 15 on the coupon.*

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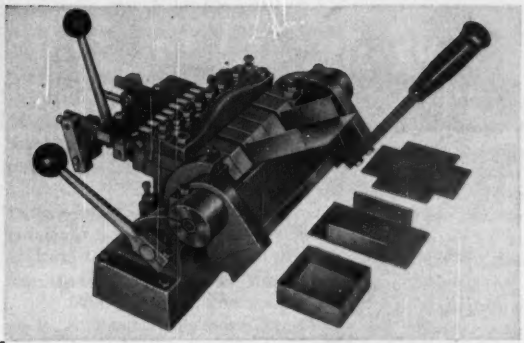

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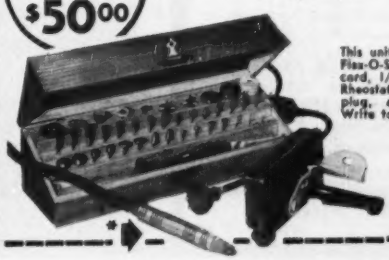

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The red handle with the black head exclusively Plumb

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Washington . . . . *from page* 32

from going through the red tape of so-called 'justification.'

"Sen. Robert A. Taft, (R., Ohio) on September 23 introduced a bill that would force the VA to abolish these discriminatory regulations. Further, the bill also would prevent any future repitition of such practices by VA. It should be backed—by veteran and nonveteran alike!"

That about summed up the issues in the feud between private schoolmen and the Veterans Administration.

But the ending was a surprise. For the first time, schoolmen succeeded in backing the VA against the wall. As protest after protest reached Washington, Veterans Administrator Carl Gray called in H. V. Stirling, overlord of veterans education, and told him to cancel instruction 1-A.

As a result, veterans need no longer show "complete justification" for any change in the course of study, and they may now enroll in schools established since 1944. The ban on "hobby" courses is still in effect. But veterans may now take general background courses which do not necessarily lead to employment objectives.

Once Around the Circuit.—As for the general Washington scene, here is a quick overview:

Having lost hope that federal aid to education will be enacted before 1950, schoolmen turned their attention towards bills which would authorize grants for constructing school buildings or, at least, would help states survey their school building needs. Earlier the Senate *did* pass a bill to promote medical education—which included a provision that George-Barden vocational funds may be used to train practical nurses. The House will probably agree when it takes up the bill next year.

On the House side, social-security legislation was passed by a thumping majority, thus promising that teachers may begin taking part in old-age and survivors insurance late in 1950.

Things were also happening along Washington streets away from the Capitol . . . The General Services Administration issued new surplus property regulations directing military and civilian agencies to declare as surplus whatever materials they could not use. (No change, however, was made so far as local schoolmen were concerned. They are still advised to keep in touch with their state agency for surplus property.) . . . Delegates returning from the Unesco meeting in Paris were gloomy, mostly because Unesco has not yet found the way to use education as a hard-hitting weapon for peace . . . The NEA declared that teachers who do not vote or take part in community affairs are not qualified to be teachers. . . . And the National Council of Chief State School Officers said it would probably "never again" meet with the AVA at its annual conventions (as was the practice in the past), "since we have problems other than vocational to discuss."

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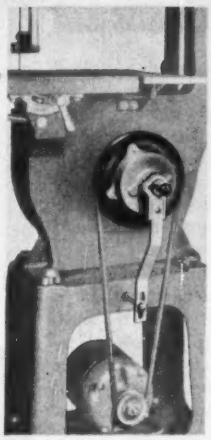

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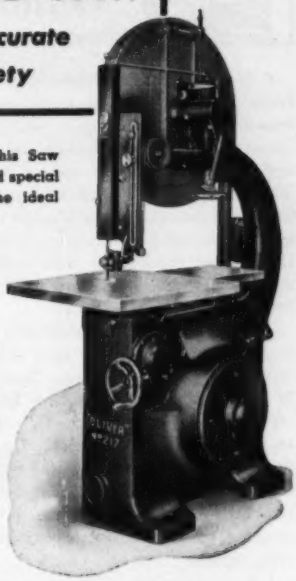

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Arts and Crafts Reach Washington.—Fresh from the outside world (which means Eastern Washington College at Cheney) comes Arne Randall into the web of federal service (which means the Elementary Division of the U.S. Office of Education). Mr. Randall's title will be specialist in fine-arts education. He has just reached his 40th birthday, and talks with enthusiasm, as if still breathing Pacific Coast air.

Titles in Washington reflect only dimly the work a specialist may actually carry on. For that reason, "specialist in fine arts" may in practice become "specialist in arts and crafts," as far as Mr. Randall is concerned. He says that his job will be to help the nation's schools help themselves to larger doses of crafts—meaning work in textiles, weaving, woods, plastics, leather, paper, clay, metals.

Like many another federal specialist, Mr. Randall will compile bibliographies on his specialty, list "good" courses of study, prepare a directory of arts supervisors and, eventually, will make a study of facilities and practices in arts education.

The chances are that he will be frequently taken away from his paper work to address arts-teacher associations, and to serve as consultant to workshops, county institutes, school systems, and teachers colleges.

The important fact is that there will be someone in Washington who will push the idea that arts and crafts are important; that schools and teachers should use for creative purposes the large variety of materials which happen to be at hand and which need not be expensive; and that the lives of boys and girls can be enriched through education toward creativeness.

The Master Teacher Defined.—What should a vocational teacher be like?

An AVA committee has recently gone into this question and come up with these answers.

A vocational teacher must be versatile. He shall have been "through the mill" of paid employment experience for a required number of years, prior to teaching his occupation. He must, moreover, remain occupationally competent and alert. The good vocational teacher is never parted from his occupation. He keeps abreast of changes and improvements and is able to teach the latest technics. He is respected for his technical knowledge and demonstrable skills. Consequently, his pupils will continue to emerge into a world of now, not of the past.

The vocational teacher must be a person of good character as well as a craftsman of the first order. He must, in addition, meet the professional requirements in his state for acceptance as an effective teacher. This type of teacher holds the respect of pupil and parent, management and labor.

The good vocational teacher must also have a well-rounded appreciation of the total school program. He must realize the values of guidance in achieving the important goals of education. Spending more time per day with students, he learns more quickly than other faculty members of their difficulties, their emotional states, their handicaps and out-of-school activities. This intimate knowledge, when passed on to the guidance counselor or administrative staff, is of utmost value in the life-adjustment of the student.

Private Schools Score a Victory.—Private trade schools in Washington recently chipped in enough money to buy full-page advertisements in all the town's newspapers. In these, they publicly poured out their hearts concerning their troubles with the Veterans Administration.

"Attention, veterans!" the ads screamed. And then they went on: "Trade schools and other private institutions that have come into existence since the G.I. Bill of Rights was passed in 1944 have performed a valuable service to the nation. Now, the Veterans Administration has put out regulations (interpreting the Appropriations Act of August 24, 1949) which may cut down the education of thousands of veterans.

"These new VA regulations place legitimate schools that have come into existence since the G.I. Bill was enacted in 1944 in the same category as nonvocational schools and courses in 'dancing, bartending, personality development, etc.'

"This interpretation means that all the new schools in bricklaying, watchmaking, tailoring, architectural drafting, upholstering, and many others, which are vocational, are 'out of bounds' for veterans. In order to attend them, veterans would have to provide 'complete justification that such course will contribute to bonafide use in the veteran's present or future business or employment.'

"And the Veterans Administration is the judge. We believe that, whether the VA can be convinced of 'justification' or not, it is discriminately unfair to impose on the post-1944 schools a handicap that will deter so many veterans

(*Continued on page* 30)

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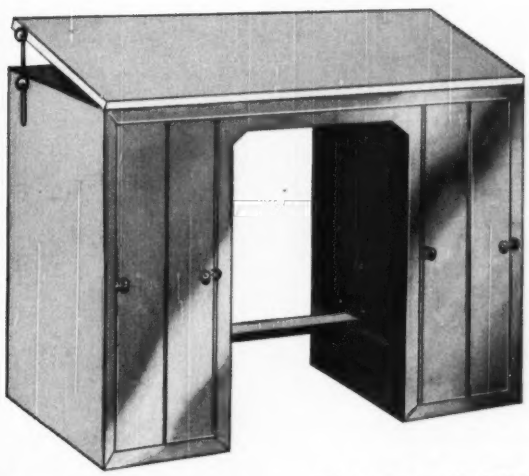

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